“Yeah Baby!” he would say with a chuckle, his booming voice resounding out of his office, down the hall and throughout the hospital he founded and led for decades. For more than 30 years, Ed Eckenhoff’s exuberance and joy was palpable in every corner of MedStar NRH. When he died in January at age 74, “Eddie” left a vacuum in the thousands of people whose lives he touched. But he also left a piece of his one-of-a-kind, bigger than life spirit—and we are all better for it.

“Ed had a gift for connecting with people, of making those around him feel as if they were his best friend,” says John Rockwood, president of MedStar NRH. “He inspired us and taught us how to use barriers in life—whatever they may be—to our advantage.”

Continued on page 2.
Loss of a Giant: Ed Eckenhoff

Eckenhoff often described his greatest barrier as his greatest gift. When a car accident killed his college roommate and left him with paraplegia at just 20-years-old, he didn’t dwell for long on what he had lost. Instead he channeled the competitive energy that made him a successful athlete into his rehabilitation and then into his studies, doubling down on the books to graduate with honors from Transylvania University. He went on to receive a Master’s degree in Education and Psychology, and another in Healthcare Administration.

“His disability was obviously life changing for him in so many ways, but not only did it not get in his way, it fueled him to accomplish what few others are capable of,” Rockwood adds. “He often said his injury was the best thing that ever happened to him.”

Role Model and Inspiration

He began his career in rehabilitation medicine in 1974 at the Rehabilitation Institute of Chicago. In 1983 he was approached by two entrepreneurial brothers about leading an effort to build a rehabilitation hospital in Washington, D.C. He and his wife Judi took the leap, moved to Washington and never looked back.

The hospital opened its doors in 1986. “That was the milestone of Ed’s incredible career,” says Rockwood. “He came to Washington to build a hospital and network that focused on ability, not disability. He was a nationally recognized figure in the field of medical rehabilitation, and in many ways led the medical profession in advocating for persons with disabilities.”

“He was an important and very strong advocate for rehab medicine,” says Edward Healten, MD, EVP and executive dean at Georgetown University Medical Center, and former medical director and director of research at MedStar NRH. “For a long time, the field was the step child in clinical care and research. But Ed helped to put rehabilitation on the map academically and in research. He knew how to develop relationships that resulted in funding for critical research and professional training.”

“When I met Ed I asked him to mentor me and teach me about how hospital leadership worked,” says Alexander Dromerick, MD, vice president for research with MedStar NRH and co-director of the MedStar NRH/Georgetown University Center for Brain Plasticity and Recovery. “He really understood what first class care and research looked like and he was committed to it.

“He accomplished so much as a role model, a national health care leader, and as advocate for policy to open doors to the physically challenged and to training the next generation of rehab physicians and therapists,” Dromerick adds.

He seemed able to connect to everyone—an inspirational personality that transcended position or title, Dr. Healten says. “Every day he strapped on the steel braces and came into the hospital at the crack of dawn—visiting patients. He was teaching the lesson to live with gusto to anyone who watched him.”

Building a Lasting Legacy

In the beginning, well before the ceremonial first spade of dirt was tossed at the hospital’s building site, Eckenhoff had a vision. He wanted to build a different kind of rehabilitation facility—to create not simply a hospital, but a multi-faceted institution that would have a far-reaching impact on the lives of people with disabling illness and injury. And he did just that. During his stewardship, MedStar NRH grew from a single acute rehab hospital to a nationally recognized center for clinical care, advocacy, education and research. His list of professional accomplishments is pages long.

But he was so much more than his resume. “I was in awe by how he could get people to follow him as a leader,” says Rockwood. “Yet it was how he affected those of us privileged to call him a friend that is most important. I know he shared every success with his wife Judi, who was the most important thing in his life.

“Still it was on the golf course where Ed’s true nature shined,” he adds. “And at the end of the round many of us discovered what it felt like to lose. He would kid us about losing, but with love and in jest to make us all feel worse about our own game, and to teach us that winning in life is not nearly as important as living life to the fullest.”

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“From the moment I met him, Ed and I bonded for life,” says Dr. Healten. “He worked hard and played hard—and encouraged each of us to do the same.”
Meeting the Challenge of Complex Injury: The Case of Congressman Steve Scalise

In an instant with the crack of a bullet, the spin of a car, or the sudden burst of vessels in the brain, lives are irrevocably changed. For U.S. Congressman Steve Scalise, the innocence of a baseball game was shattered when a gunman aimed his weapon at the field where members of Congress were practicing for an annual game scheduled for the next evening.

His grave bullet wounds and his difficult journey through multiple surgeries and infection have been well documented. But like so many other patients with complex injuries, survival is just the first step in a recovery that may continue for months or years.

When the Congressman left his stay at MedStar Washington Hospital Center, he was immediately admitted to MedStar National Rehabilitation Hospital for an eight week stay.

But for Congressman Scalise—and other patients with more complicated injury or illness—rehabilitation begins before they enter the doors of MedStar NRH, explains John Aseff, MD, the physiatrist who cared for Rep. Scalise.

“When patients have multiple organ, nerve and blood vessel injuries like the Congressman, we complete assessments before they are discharged from acute care to better understand their continued medical needs, as well as begin to map out their rehab.”

The shared electronic medical record systems among MedStar Health hospitals helps smooth transition of care from one facility to another, he adds. “We also have MedStar NRH physiatrists at our sister MedStar hospitals across the region to provide support and counsel,” Dr. Aseff explains.

**Multidisciplinary Care Team**

When the Congressman arrived at MedStar NRH, a multidisciplinary care team had already been assigned to his care and provided an initial review of his immediate needs. The team works in concert to develop a treatment plan and meets weekly to share updates on the patient’s progress.

“Family meetings are also held to provide the patient and loved ones with a more global picture of the present—and the future,” explains Social Worker Joan McKinon-Reeves, LICSW, MedStar NRH director of case managers.

“Case managers act as a bridge to services in the community—to the best next steps in a patient’s rehabilitation,” McKinon-Reeves adds.

“Unlike some other facilities, we’re equipped to provide a full-range of medical services, 24/7,” says Nailah Campbell, BSN, RN, nursing manager. “We are trained to care for sicker patients and prepared for all kinds of special needs from kidney dialysis to wound care.”

**Rigorous Therapy, Six Days a Week**

“For patients with multiple injury and nerve damage like the Congressman, the MedStar NRH team includes the expertise of therapists with specialized training and years of experience caring for people with neurological injury,” says Amanda Summers, MS, OTR/L, ATP.

Patients are put through rigorous therapy during their acute rehab—often for hours a day, nearly every day of the week. Rep. Scalise was no exception. “He pushed himself and his body for three hours a day, six days a week, moving from wheelchair, to a walker and onto crutches. In time, he went from walking 20 feet to 200,” says Meaghan Minzy, PT, DPT.

Progress like this is the result of a patient’s determination, the skill of rehab experts—plus the latest technology, such as FES, functional electrical stimulation to muscles; and the ZeroG®—the robotic body weight support system first developed at MedStar NRH.

To ensure continuity of care, Dr. Aseff visited Rep. Scalise twice a day and watched him during his therapy.

Most people are inpatient about recovery—including the Congressman. “But using energy efficiently is very important to recovery,” Dr. Aseff adds.

The Congressman’s hard work paid off and he has made a remarkable recovery. “Still patients with very complex injuries face challenges as they learn to adjust to a new normal,” says Minzy. “For all of us, it never gets old to watch as patients improve and leave us able to move on with their lives.”
New Sports Medicine Outpatient Center Opens at MedStar Franklin Square

MedStar Health’s orthopaedic and sports medicine’s pre-eminence in the region continues to grow with the opening of the latest orthopaedic and sports medicine physician and therapy site on the campus of MedStar Franklin Square Medical Center.

“The new center features the expertise of MedStar Health orthopaedic and sports medicine primary care physicians, as well as MedStar NRH Rehabilitation Network’s physical therapists in one location to serve this large east Baltimore County community,” says John Brickley, vice president for ambulatory operations and network development.

“The program occupies two floors of the Medical Arts Building directly across the street from the hospital to provide convenient, seamless care to patients.”

East Baltimore’s First Orthopaedic and Sports Medicine Center

The center is the first in this area to provide a wide range of orthopaedic, sports medicine and rehabilitation services. “It’s been designed in keeping with our other orthopaedic and sports medicine centers in the Greater Washington, D.C. area, and the Greater Baltimore region in Bel Air, Timonium and Ellicott City,” Brickley says.

“In addition to sports medicine services, we provide full-service orthopaedic and musculoskeletal care for everything from back pain and joint replacement rehabilitation to orthopaedic injuries, as well as post-surgical care.”

The joint project with MedStar Franklin Square features the skills of four physical therapists and a physical therapy assistant, says Jill Anderson, PT, assistant vice president for the Baltimore region. “The 3,500 square-foot, fully equipped rehab gym is located adjacent to the physician offices and features the AlterG® Anti-Gravity Treadmill that decreases the force of impact of walking and running, and increases it over time as injury heals,” Anderson explains.

“Our therapy services are focused on the full scope of sports injury rehab and prevention, including concussion care, and a ‘return to play’ program to rehab ACL knee injuries and ensure a safe return to sports activity,” she adds.

“Our physical therapists are orthopaedic certified specialists, and among the team are therapists with special certification in concussion and manual therapy,” says Laura H. Long, PT, regional director.

“We are treating both adolescents and adults—including weekend warriors and kids playing team sports. And for our patients’ convenience, we are open early and late, before and after work and school,” Long notes.

Ten physicians are currently staffing the center, bringing together the teams of two practices with long histories of service to this community, explains David Cohen, MD, director of sports medicine at MedStar Franklin Square.

“The practice has a wide range of expertise, with orthopaedists who specialize in hand surgery, pediatrics, joint replacement surgery and general orthopaedics. Two primary care sports medicine physicians are also a critical part of the practice,” he adds.

“I provide services for the Baltimore Brigade arena football team, and Dr. Leigh Ann Curl provides orthopaedic care for the Baltimore Ravens. But we aren’t simply treating professional athletes: The center is also providing services to collegiate teams and high school athletes.

“The key feature of the center is our integrated care—including a shared waiting area for both physicians and therapists. Our location across from the hospital gives surgical patients ready access for post-procedure appointments and therapy. It is streamlined service that benefits our patients and promotes fuller recovery,” Dr. Cohen adds.
Medical Staff News

Kritis Dasgupta, MD, medical director of the Brain Injury Program, has completed the Oxford University MSc in Evidence Based Healthcare. The program is designed to help health professionals base their clinical and health management decisions on valid, reliable and relevant evidence, determined by sound scientific research and evaluation. It is a joint program between the Nuffield Department of Primary Care Health Sciences and the Department for Continuing Education’s Continuing Professional Development Centre and works in collaboration with the renowned Centre for Evidence Based Medicine in Oxford, England.

Richard Zorowitz, MD, attending physician, outpatient physician services at MedStar NRH, was among an elite group of stroke experts who authored the 70-page Guidelines for Adult Stroke Rehabilitation and Recovery. It was named as among the top 100 most-cited neuro rehabilitation articles since 2005. The guidelines, released by the American Heart Association/American Stroke Association, were the result of a critical review of the literature to determine the strength of the evidence and the results, and establish which rehabilitation protocols have the strongest support in the literature—and where research efforts need to be strengthened. The guidelines called for a “sustained and coordinated” rehabilitation effort from a large multidisciplinary team to produce the best outcomes for patients—and gave high marks to acute rehabilitation facilities like MedStar National Rehabilitation Hospital.

William Garmoe Named Psychology Services Director

William Garmoe, PhD, has been named director of psychology services, a post held by Philip Appel, PhD, for more than 20 years. Dr. Appel, who will be stepping down at the end of June, will continue to provide patient care and serve as a clinical resource to the service and the MedStar NRH Network and will be located at the MedStar Health Spine Center in Chevy Chase, Md.

Dr. Garmoe, now assistant director and assistant professor of rehab medicine at Georgetown University, joined MedStar NRH 28 years ago, noting that Dr. Appel created an environment in which he had the autonomy to build a practice. “When I first arrived I thought I’d stay five years,” he says. “But I found a home here professionally and the support and encouragement to not only engage in clinical work, but also follow my passion for neuropsychology and conduct research into the effect of TBI on self-awareness,” he adds.

While he didn’t come into the field to head a department, Dr. Garmoe says he looks forward to the challenge. “We are chock-full of really bright, capable people—both seasoned professionals and early career psychologists.” For the future, Dr. Garmoe says the department will continue to “stay strong and grow.

“This fall, our neuropsychology fellows will join the team and I anticipate we will continue to increase the psychology capacity of the expanding MedStar NRH outpatient network.”

MedStar NRH PM&R in Research Dollars

MedStar NRH/Georgetown University Department of Physical Medicine and Rehabilitation earned 15th place in the annual ranking of National Institutes of Health research funding by the Blue Ridge Institute for Medical Research.

The Institute ranks all national university-based PM&R departments based on both direct and indirect costs. The data in the 2017 award files was obtained from the Research Portfolio Online Reporting Tool (RePORT) from the National Institutes of Health.

“This ranking is a sign of excellence and success,” says Alexander Dromerick, MD, vice president for research, MedStar NRH and chair of Rehabilitation Medicine at Georgetown University Medical Center.

“It says a lot about the growth of our research program and how rehabilitation research is increasingly recognized as a critically important endeavor nationwide.”

Dr. Dromerick alone is ranked 13th among rehabilitation researchers in the country for NIH funding.
DIEGO: Video Games in Anti-Gravity for Arm Rehab

Space age technology has become a common component of rehabilitation therapy. The ZeroG® and AlterG® have been in use for nearly a decade helping thousands of patients and athletes learn to walk and run in a safe, no or low gravity environment. The technology, which provides weight support for people with a wide variety of neuromuscular and orthopaedic diagnoses, has proven to be a boon for patients and the therapists who treat them.

Now an ingenious new tool called DIEGO is offering patients at MedStar NRH with upper extremity problems the same boost in recovery. The arm-shoulder rehab device uses video games and weight support through “gravity compensation” to help improve range of motion, strength and extension.

“As a therapist, it gives me a second set of hands,” says Megan Mahaffey, OT. “As the patient sits in front of the video screen, their arms are supported by overhead arm straps as they move through the tasks in the games on the screen. Because I’m not moving the patient’s arms, I am free to help the patient’s shoulder and scapula, for example.”

Programmable Software

The therapist can program DIEGO so that patients don’t experience the full weight of their arms. This is very motivating for patients who have lost all or some of their arm mobility. DIEGO allows them to move with more ease. “Over time we can increase the amount of weight patients are carrying as they gain strength and improved motion,” Mahaffey explains.

The DIEGO’s software records therapy progress—information that can be called up at any time during rehabilitation providing both patient and therapist critical information about weaknesses and successes.

“It’s very programmable,” says Mahaffey. “I can set it so the patient can play for as little as 30 seconds and up to as much as one hour. And there are a variety of activities and games at different levels of difficulty, as well.

“I can also adjust it to reflect the individual patient’s level of movement within a couple of degrees. And I can change the number of repetitions and types of movements the patient will be asked to perform, such as extend their elbow or reach across their chest,” she adds.

Patient reaction has been positive, Mahaffey says. “I’d say that between 90 and 95 percent of patients love it! I’ve not had a patient who didn’t want to use DIEGO again after their first time using the technology.”

Progress through Play

Marc Breslaw was suffering the severe effects of the autoimmune disease Guillain-Barre syndrome—a rare disorder in which the body’s immune system attacks the nerves. When he first came to MedStar NRH he had very limited motion in his upper extremities, Mahaffey explains.

Performing everyday tasks with his arms became a real chore. But Breslaw says, “DIEGO really helped me with my arm extension.”

“A couple of weeks into his stay, Mr. Breslaw used DIEGO and loved it,” she says. “By the time he left after a month, he could dress and feed himself and use his cell phone.”

Like other patients, Breslaw used DIEGO two or three times a week in conjunction with conventional occupational therapy that helps patients perform the skills of daily living, such as dressing and bathing. “In total, patients will have three hours of therapy every day while an inpatient—usually a mix of physical, occupational and speech therapy, depending on their needs,” Mahaffey adds.

“DIEGO has become a really important additional tool that is enhancing patient recovery,” Mahaffey notes. “It’s also exciting to realize that the funds to purchase the technology were made possible by MedStar NRH Team Member donations from our 2016 Power to Heal campaign. That makes it just a bit more special for all of us.”
RICH BOUNTY FOUND IN YOUNG BRAINS

The brains of children who suffered stroke at or soon after birth are rich sources of critical information. The treasures their neurons hold may lead to a better understanding of language recovery following stroke, and lead to new rehabilitation interventions for millions of adult patients.

At the February annual meeting of the American Association for the Advancement of Science (AAAS), Elissa Newport, PhD, presented preliminary findings of innovative research that is helping to unravel the mystery of these young brains.

Dr. Newport, co-director of the Center for Brain Plasticity and Recovery at MedStar NRH-Georgetown University Medical Center, has been studying the unique capacity for plasticity in the brains of young children. The Pediatric Stroke Research Project is focused on understanding the neural processes that occur in the developing brain as it recovers from stroke—and how this process of recovery compares to recovery after strokes in adults. The project is a collaboration of faculty in the Center and with pediatric neurologists and cognitive neuroscientists from Children’s National Health System in D.C., Children’s Hospital of Philadelphia and Johns Hopkins University.

**Left Side-Right Side**

The initial study results reported at the AAAS meeting indicate that young teens and adults who suffered perinatal stroke and damage to the language center on the brain’s left side use the right side of their brain for language. “The damage is similar to that found in many adult stroke patients,” Dr. Newport says. “But in these children, speech develops normally. In adults, this does not happen. Similar damage to the left hemisphere language center results in aphasia.”

The ongoing study is recruiting volunteers who are now ages 12 years and older and who are former patients from a number of medical centers with specific types and areas of injury. The initial findings are based on 12 patients, ages 12 to 25. They all received a battery of tests to examine language and cognitive function, and underwent imaging studies, including functional MRI.

**Mirror Location Adaptation**

“On imaging we can clearly see the damaged tissue in the left area of the brain. And with functional imaging, we can also determine the areas of the brain from which language understanding and speech originate,” Dr. Newport explains. “The imaging shows that it isn’t just any remaining and healthy area of the brain that has the capacity to adapt,” she notes. “In these patients, language understanding occurs in the right brain in an area that is the mirror image location of the left brain that is normally responsible for language.”

While these are early results, they add important information to our understanding of how the brain reorganizes after stroke in children, Dr. Newport says. It also clarifies that every function, like language, has particular regions that may be able to take over if its primary brain area is injured—a discovery that may have implications in the rehabilitation of adult stroke survivors. By understanding brain plasticity in children, scientists might be able to develop ways to boost brain plasticity in adults.

Some research in mice may hint at how these interventions might take shape, Dr. Newport says. Takao Hensch, PhD, the Center’s affiliate researcher at Harvard University, has developed novel drug interventions that appear to improve plasticity in rodents following stroke.

“We are just beginning to scratch the surface of possible therapeutic interventions,” Dr. Newport says. “These may include pharmaceutics, trans-cranial magnetic stimulation, or genetic engineering.”

“Our research project will continue for several years, and we expect to ultimately assess 30 study participants,” she adds. “This larger study population will help to clarify our findings—and further enhance our understanding of brain plasticity.”
Arthur De Luigi’s
FIRST-OF-ITS-KIND BOOK ON ADAPTIVE SPORTS


Dr. De Luigi is an internationally renowned expert in the field with extensive experience working with disabled athletes. He has served as the Medical Director and Head Team Physician for the U.S. Adaptive Alpine Ski and Snowboarding Teams, Medical Director of the Walter Reed Army Medical Center Adaptive Sports Medicine Program, and coverage of Paralympic athletes at the United States Olympic Training Center. He is currently the Head Team Physician and Director of Sports Performance for the Washington Wizards, Medical Director for the Washington Mystics, and Team Physician for the Washington Spirit.

One section of the book examines the history of the care, policies, laws, biomechanics and technology of adaptive sports. Another focuses on the medical considerations of the adaptive athlete and another examines a number of specific adaptive sports in depth.

Reviewer Physiatrist Katherine L. Dec, MD of the Integrated Musculoskeletal Medicine Institute calls the guide “a concise reference for physicians and allied health professionals who care for people with physical disability. It is valuable for the planning, community engagement, and understanding of the exercise and sports components of adaptive competition.”